

WHAT IS CLAIMED IS:

1. A camera module comprising a substrate provided with a through-hole for light transmission, a light receiving portion, an imaging element flip chip mounted on one side of the substrate such that the light receiving portion is exposed through the through-hole, and a lens unit mounted on the other side of the substrate so as to cover the space over the light receiving portion of the imaging element.

2. A camera system using a camera module comprising a substrate provided with a through-hole for light transmission, a light receiving portion, an imaging element flip chip mounted on one side of the substrate such that the light receiving portion is exposed through the through-hole, and a lens unit mounted on the other side of the substrate so as to cover the space over the light receiving portion of the imaging element.

3. An optical module comprising a substrate provided with a through-hole for light transmission, an optical function portion, an optical element flip chip mounted on one side of the substrate such that the optical function portion is exposed through the through-hole, and a lens unit

mounted on the other side of the substrate so as to cover the space over the optical function portion of the optical element.

4. An imaging element having on one side a light receiving portion and on the other side opposite to the light receiving portion a shielding layer.

5. An imaging device comprising a substrate and an imaging element having on one side a light receiving portion, flip chip mounted on the substrate such that said one side is opposed to the substrate, and having a shielding layer on the back surface of the element on the opposite side of the light receiving portion.

6. An imaging device comprising a substrate having a through-hole for light transmission, and an imaging element having on one side a light receiving portion, flip chip mounted on said one side of the substrate such that the light receiving portion is exposed through the through-hole, and a shielding layer on the back surface of the element on the opposite side of the light receiving portion.

7. An imaging device according to Claim 5, wherein there is provided a black resin applied to the periphery of

the element including the connecting portion between the substrate and the imaging element by the flip chip mounting so as to cover the side surface and the back surface of the imaging element, a part of the resin constituting the shielding layer.

8. A camera module comprising a substrate having a through-hole for light transmission, an imaging element having on one side a light receiving portion, flip chip mounted on said one side of the substrate such that the light receiving portion is exposed through the through-hole, and a shielding layer on the back surface of the element on the opposite side of the light receiving portion, and a lens unit mounted on the other side of the substrate.

9. A camera system using a camera module comprising a substrate having a through-hole for light transmission, an imaging element having on one side a light receiving portion, flip chip mounted on said one side of the substrate such that the light receiving portion is exposed through the through-hole, and a shielding layer on the back surface of the element on the opposite side of the light receiving portion, and a lens unit mounted on the other side of the substrate.